WHAT IS CLAIMED IS:

1. An image processing method for a printing apparatus, which uses a printing head provided with a plurality of arranged printing elements and performs a plurality of times of scanning with the printing head on a printing medium, between the plurality of times of feeding of the printing medium being executed, so that different printing elements are correspondingly used for a same scanning line to form dots for performing printing,

wherein if printing is performed on a second area in which a deviation of dot forming location becomes lager than that in a first area, the first and second areas being defined on the printing medium in relation to feeding said printing medium, a process relating to generation of dot forming data for printing in each of the plurality of times of scanning is differentiated from the process relating to generation of dot forming data for the first area.

2. An image processing method as claimed in claim 1, wherein the first area is an area on the printing medium to which the printing head is capable of being used when the printing medium is fed by both an upstream roller and a down stream roller, both roller being provided for feeding the printing medium, and the second area is an area on the printing medium to which the printing head is capable of being used when the printing medium is fed by any one

of the upstream roller and the down stream roller.

3. An image processing method for a printing apparatus, which uses a printing head provided with a plurality of arranged printing elements and performs a plurality of times of scanning with the printing head on a printing medium, between the plurality of times of feeding of the printing medium being executed, so that different printing elements are correspondingly used for a same scanning line to form dots for performing printing,

wherein a process relating to generation of dot forming data for printing in each of the plurality of times of scanning is differentiated in accordance with a location of the printing medium on a feeding path.

4. An image processing method as claimed in claim 3, wherein the process relating to generation of dot forming data is differentiated between a case that the printing medium is in a first location in which the printing medium is fed by both an upstream roller and a down stream roller, both roller being provided for feeding the printing medium, and a case that the printing medium is in a second location in which the printing medium is fed by any one of the upstream roller and the down stream roller.

5. An image processing method as claimed in claim 4, wherein the process relating to generation of dot forming

data for a first area on the printing medium to which the printing head is capable of being used when the printing medium is in the first location is differentiated from the process relating to generation of dot forming data for a second area on the printing medium to which the printing head is capable of being used when the printing medium is in the second location.

6. An image processing method as claimed in claim 2, wherein the process relating to generation of dot forming data for the second area is differentiated from the process relating to generation of dot forming data for the first area, so that the a dot is formed in each of the plurality of times of scanning so as not to be noticeable a deviation of dot forming location.

7. An image processing method as claimed in claim 1, wherein the process relating to generation of dot forming data is a masking process using a mask pattern.

8. An image processing method as claimed in claim 7, wherein on the second area, printing is performed using a part of the plurality of printing elements in the printing head so that feeding of the printing medium is executed at a smaller feeding amount than the feeding amount in the first area.

9. An image processing method as claimed in claim 7, wherein duty in the masking process for each of the plurality of times of scanning on the second area is differentiated from the duty for the first area.

10. An image processing method as claimed in claim 9, wherein the duty in the masking process for the second area is distributed to the plurality of times of scanning in a manner that to a scanning the longer time separated from a predetermined scanning, the higher the duty is distributed.

11. An image processing method as claimed in claim 10, wherein a number of times of the plurality of times of the scanning is determined based on an accumulated error relating to feeding accuracy, and the duty in the masking process is distributed to the scanning in which the accumulated error is smaller than a predetermined value.

12. An image processing method as claimed in claim 9, wherein the duty in the masking process for the second area is determined so that the duty for at least a predetermined scanning of the plurality of times of scanning is increased by adding noise.

13. An image processing method as claimed in claim 12, wherein the duty in the masking process for the second area

is determined so that duty for the plurality of times of scanning is increased by adding noise based on weighting of the noise with respect to the predetermined scanning as a middle.

14. An image processing method as claimed in claim 7, wherein the mask pattern used the masking process for each of the plurality of times of scanning on the second area is differentiated from the mask pattern for the first area.

15. An image processing method as claimed in claim 14, wherein the mask pattern for the second area is a pattern for forming a plurality of dots in a feeding direction in each of the plurality of times of scanning.

16. An image processing method as claimed in claim 14, wherein the mask pattern for the second area is a pattern for forming a plurality of dots in a feeding and scanning directions in each of the plurality of times of scanning.

17. An image processing method as claimed in claim 14, wherein the mask pattern for the second area is a pattern for forming a plurality of dots, locations of which are deviated randomly, in the plurality of times of scanning.

18. An image processing method as claimed in claim 14, wherein the mask pattern for the second area is a pattern

for forming a plurality of dots, which include a high frequency component in a spatial frequency of dots, in the plurality of times of scanning.

19. An image processing method as claimed in claim 14, wherein a part of the plurality of printing elements in the printing head is used for printing on the second area so that an feeding amount of the printing medium for the second area is set at 1/N (N is an integer greater than or equal to 2) of the feeding amount for the first area.

20. An image processing method as claimed in claim 14, wherein the process relating to generation of dot forming data is a process using an index pattern in accordance with density level of a pixel.

21. An image processing method as claimed in claim 14, wherein the process relating to generation of dot forming data is an error diffusion process.

22. An image processing method as claimed in claim 14, wherein the process relating to generation of dot forming data is a dither process.

23. An image processing method as claimed in claim 7, wherein the printing head is provided with the plurality of arranged printing elements for respective colors used

for printing, and the masking process is differentiated between the respective colors.

24. An image processing method as claimed in claim 7, wherein the printing apparatus is capable of executing a plurality of printing modes and the masking process is differentiated between the plurality of printing modes.

25. An image processing method as claimed in claim 7, wherein the printing head is capable of forming two or more sizes of dots and the masking process is differentiated in accordance with the size of dot formed.

26. An image processing method as claimed in claim 7, wherein the printing head is capable of forming two or more sizes of dots for respective colors and the masking process is differentiated in accordance with the size of dot formed.

27. An image processing method as claimed in claim 7, wherein each of the plurality of printing elements comprising an ejection port for ejecting ink and heating element for generating thermal energy used for ejecting the ink.

28. A control method for a printing apparatus, which uses a printing head provided with a plurality of arranged

printing elements and performs scanning with the printing head relatively to a printing medium so as to perform printing,

wherein if printing is performed on a second area in which a deviation of dot forming location becomes lager than that in a first area, the first and second areas being defined on the printing medium in relation to feeding said printing medium, feeding of the printing medium is executed at the same feeding amount as the first area, a range of printing elements used is changed by shifting the printing elements used without changing a number of printing elements which is a number of printing elements used for the first area, and printing is controlled to be performed with the changed printing elements.

29. An image processing apparatus for performing an image processing so as to use a printing head provided with a plurality of arranged printing elements and to perform a plurality of times of scanning with the printing head on a printing medium, between the plurality of times of feeding of the printing medium being executed, so that different printing elements are correspondingly used for a same scanning line to form dots for performing printing,

wherein if printing is performed on a second area in which a deviation of dot forming location becomes lager than that in a first area, the first and second areas being defined on the printing medium in relation to feeding said

printing medium, a process relating to generation of dot forming data for printing in each of the plurality of times of scanning is differentiated from the process relating to generation of dot forming data for the first area.

30. An image processing apparatus as claimed in claim 29, wherein the first area is an area on the printing medium to which the printing head is capable of being used when the printing medium is fed by both an upstream roller and a down stream roller, both roller being provided for feeding the printing medium, and the second area is an area on the printing medium to which the printing head is capable of being used when the printing medium is fed by any one of the upstream roller and the down stream roller.

31. An image processing apparatus for performing an image processing so as to use a printing head provided with a plurality of arranged printing elements and to perform a plurality of times of scanning with the printing head on a printing medium, between the plurality of times of feeding of the printing medium being executed, so that different printing elements are correspondingly used for a same scanning line to form dots for performing printing,

wherein a process relating to generation of dot forming data for printing in each of the plurality of times of scanning is differentiated in accordance with a location of the printing medium on a feeding path.

32. An image processing apparatus as claimed in claim 31, wherein the process relating to generation of dot forming data is differentiated between a case that the printing medium is in a first location in which the printing medium is fed by both an upstream roller and a down stream roller, both roller being provided for feeding the printing medium, and a case that the printing medium is in a second location in which the printing medium is fed by any one of the upstream roller and the down stream roller.

33. An image processing apparatus as claimed in claim 32, wherein the process relating to generation of dot forming data for a first area on the printing medium to which the printing head is capable of being used when the printing medium is in the first location is differentiated from the process relating to generation of dot forming data for a second area on the printing medium to which the printing head is capable of being used when the printing medium is in the second location.

34. An image processing apparatus as claimed in claim 30, wherein the process relating to generation of dot forming data for the second area is differentiated from the process relating to generation of dot forming data for the first area, so that the a dot is formed in each of the plurality of times of scanning so as not to be noticeable a deviation

of dot forming location.

35. An image processing apparatus as claimed in claim 34, wherein the process relating to generation of dot forming data is a masking process using a mask pattern.

36. An image processing apparatus as claimed in claim 35, wherein on the second area, printing is performed using a part of the plurality of printing elements in the printing head so that feeding of the printing medium is executed at a smaller feeding amount than the feeding amount in the first area.

37. An image processing apparatus as claimed in claim 35, wherein duty in the masking process for each of the plurality of times of scanning on the second area is differentiated from the duty for the first area.

38. An image processing apparatus as claimed in claim 37, wherein the duty in the masking process for the second area is distributed to the plurality of times of scanning in a manner that to a scanning the longer time separated from a predetermined scanning, the higher the duty is distributed.

39. An image processing apparatus as claimed in claim 38, wherein a number of times of the plurality of times of the

scanning is determined based on an accumulated error relating to feeding accuracy, and the duty in the masking process is distributed to the scanning in which the accumulated error is smaller than a predetermined value.

40. An image processing apparatus as claimed in claim 37, wherein the duty in the masking process for the second area is determined so that the duty for at least a predetermined scanning of the plurality of times of scanning is increased by adding noise.

41. An image processing apparatus as claimed in claim 40, wherein the duty in the masking process for the second area is determined so that duty for the plurality of times of scanning is increased by adding noise based on weighting of the noise with respect to the predetermined scanning as a middle.

42. An image processing apparatus as claimed in claim 35, wherein the mask pattern used the masking process for each of the plurality of times of scanning on the second area is differentiated from the mask pattern for the first area.

43. An image processing apparatus as claimed in claim 42, wherein the mask pattern for the second area is a pattern for forming a plurality of dots in a feeding direction in each of the plurality of times of scanning.

44. An image processing apparatus as claimed in claim 42, wherein the mask pattern for the second area is a pattern for forming a plurality of dots in a feeding and scanning directions in each of the plurality of times of scanning.

45. An image processing apparatus as claimed in claim 42, wherein the mask pattern for the second area is a pattern for forming a plurality of dots, locations of which are deviated randomly, in the plurality of times of scanning.

46. An image processing apparatus as claimed in claim 42, wherein the mask pattern for the second area is a pattern for forming a plurality of dots, which include a high frequency component in a spatial frequency of dots, in the plurality of times of scanning.

47. An image processing apparatus as claimed in claim 36, wherein a part of the plurality of printing elements in the printing head is used for printing on the second area so that an feeding amount of the printing medium for the second area is set at 1/N (N is an integer greater than or equal to 2) of the feeding amount for the first area.

48. An image processing apparatus as claimed in claim 35, wherein the process relating to generation of dot forming data is a process using an index pattern in accordance with

density level of a pixel.

49. An image processing apparatus as claimed in claim 35, wherein the process relating to generation of dot forming data is an error diffusion process.

50. An image processing apparatus as claimed in claim 35, wherein the process relating to generation of dot forming data is a dither process.

51. An image processing apparatus as claimed in claim 35, wherein the printing head is provided with the plurality of arranged printing elements for respective colors used for printing, and the masking process is differentiated between the respective colors.

52. An image processing apparatus as claimed in claim 35, wherein the printing is capable of being executed at a plurality of printing modes and the masking process is differentiated between the plurality of printing modes.

53. An image processing apparatus as claimed in claim 35, wherein the printing head is capable of forming two or more sizes of dots and the masking process is differentiated in accordance with the size of dot formed.

54. An image processing apparatus as claimed in claim 35,

wherein the printing head is capable of forming two or more sizes of dots for respective colors and the masking process is differentiated in accordance with the size of dot formed.

55. An image processing apparatus as claimed in claim 35, wherein each of the plurality of printing elements comprising an ejection port for ejecting ink and heating element for generating thermal energy used for ejecting the ink.

56. A printing apparatus, which uses a printing head provided with a plurality of arranged printing elements and performs scanning with the printing head relatively to a printing medium so as to perform printing,

wherein if printing is performed on a second area in which a deviation of dot forming location becomes lager than that in a first area, the first and second areas being defined on the printing medium in relation to feeding said printing medium, feeding of the printing medium is executed at the same feeding amount as the first area, a range of printing elements used is changed by shifting the printing elements used without changing a number of printing elements which is a number of printing elements used for the first area, and printing is controlled to be performed with the changed printing elements.

57. A storage medium in which a program is stored readably by a computer, the program being provided for causing the computer to execute an image processing for a printing apparatus, which uses a printing head provided with a plurality of arranged printing elements and performs a plurality of times of scanning with the printing head on a printing medium, between the plurality of times of feeding of the printing medium being executed, so that different printing elements are correspondingly used for a same scanning line to form dots for performing printing,

wherein said program comprising the step of executing an image processing in which, if printing is performed on a second area in which a deviation of dot forming location becomes lager than that in a first area, the first and second areas being defined on the printing medium in relation to feeding said printing medium, a process relating to generation of dot forming data for printing in each of the plurality of times of scanning is differentiated from the process relating to generation of dot forming data for the first area.

58. A program for causing a computer to execute an image processing for a printing apparatus, which uses a printing head provided with a plurality of arranged printing elements and performs a plurality of times of scanning with the printing head on a printing medium, between the plurality of times of feeding of the printing medium being

executed, so that different printing elements are correspondingly used for a same scanning line to form dots for performing printing,

wherein said program comprising the step of executing an image processing in which, if printing is performed on a second area in which a deviation of dot forming location becomes lager than that in a first area, the first and second areas being defined on the printing medium in relation to feeding said printing medium, a process relating to generation of dot forming data for printing in each of the plurality of times of scanning is differentiated from the process relating to generation of dot forming data for the first area.